

**From:** [Ian Sinks](#)  
**To:** [Paul Kolp](#)  
**Subject:** Ridgefield Pits Tech Memo comments  
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I should have written this immediately after we talked... Ah well, so much for getting my comments to you early.

Overall, I appreciate the quality and quantity of information in the memo - well done! My first reaction to the overview of the issues and strategies that were identified during the process was that I don't agree with some of the options. But that, of course, was not the point. I appreciate that you captured the options and opportunities discussed to set the framework for the alternatives review. Again, well done.

My primary high-level comment is that if the recovery of the East Fork Lewis River is going to be a serious effort, which I think it should be, then it needs to be processed based, ambitious and needs to address both the reach level issues identified in the memo but also some of the wider watershed issues outside the scope of your analysis.

There are ways to accomplish restoration objectives that are not processed based, but I believe, and the scientific literature strongly supports, that to achieve sustainable results the natural processes must be engaged to accomplish the objectives. This is particularly true when factoring in climate change. To this end I am not supportive of strategies that, for example, use pipe infrastructure to capture and deliver cold water to support salmonid habitat. In my experience, these approaches often fail and almost certainly require regular and costly maintenance while providing a more limited level of functionality.

If we are going to recover the EFLR to a functional condition then I think it is worth the investment to do it comprehensively. We should be ambitious. It might be the costliest option up front to move infrastructure, fill mine pits, address flow, install complexity, and complete revegetation on the whole reach, but this is the option that will return the best, most certain results, and highest return for the dollar over the long term. We should not let initial costs limit our thinking or the preferred option. If the EFLR is worth restoring, and I think it is, then the funding will be there. Partial measures are what has gotten the river to where it is today, and won't help get the river back to where I think the whole group hopes it can be again. At least in this, you should have group unanimity.

I also feel that the Achilles heel of this effort is the surrounding watershed (Mill Creek, perhaps as a particular example) and water withdrawal that has significant and fundamental impacts on late season flow. On this second point, I am not sure that project objectives can be fully realized unless this is addressed in some manner.

I am strongly supportive of Alternative 3 - full floodplain and pits re-grade. I think this is the approach that will be most successful in achieving the vision for the EFLR. It also works with Alternative 4, 5 and 6 project elements, which can be phased in as complementary projects as funding is available (not sure what the right order is, but I think moving from upstream to downstream makes sense). Relocating the channel to the pre-1996 location (Alternative 2) is a bad idea unless it is supported geomorphically. There is a reason the channel avulsed, and simply moving the channel back likely won't work. Alternative 1 is always an option - the river will recover over time (barring additional insults to its function) but I believe there is need for proactive action if the fish populations are to sustain in the watershed.

Some additional, more specific, comments include:

- Defining the CMZ is a critical step. I think it should include the Daybreak pits (currently being protected in the HCP restoration plan), but only if the hydrology and geomorphic processes can support this approach. I don't think it is a good idea to have a portion of the floodplain isolated, but the significant alterations to the historic CMZ and hydrology may preclude including this area into a long-term design given the HCP and likely landowner willingness to open that process up.
- Is your reference to 50% vegetation cover an objective for the stream channel or the floodplain as a whole? Seems low if for the floodplain.
- The comment about reducing costs by allowing vegetation to recover naturally before planting is a risky one in that area - the weed presence of particularly difficult species is high (knotweed, thistle, knapweed, blackberry, canarygrass, butterfly bush, others). It may cost more in the long run if you let the invasion happen, then implement control, then plant and then continue maintenance control for a number of years.
- I really like the alternatives analysis summary table. It might be worth adding a column to evaluate the self-sustaining nature of the approach and/or its resilience to changing conditions (climate change, flow, etc).

Thanks Paul. Great tech memo and process. Feel free to call with any questions.

Ian

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